



Digitized by the Internet Archive
in 2011 with funding from
LYRASIS members and Sloan Foundation

Ag 81.3:109

CONN
S
43
E22
no. 109

O. E. S. LIBRARY. COP. 2

THE
Connecticut Agricultural Experiment Station,
NEW HAVEN, CONN.

BULLETIN No. 109.

AUGUST, 1891.

The Bulletins and Reports of this Station are mailed free to every citizen of Connecticut who applies for them seasonably.

CONTENTS.

Notice, page 2

FERTILIZERS.

Correction, page 2

Nitrogenous Superphosphates, Analysis and Summary, . " 2

Special Manures, . . " " " 7

Home Mixtures, . . " " " 8

NOTICE.

Repeated inquiry has been made at this Station regarding the practical operation and success of the method of paying for milk according to the quantity of fat in it as determined by the Babcock, Patrick, or Beimling methods, and also regarding the preservation of so-called "composite samples" which enables the operator to test the quality of the whole week's milk in one operation.

The method of paying for milk according to the quantity of fat in it is being used with success at the creamery of J. B. Sanford, Esq., in Redding, and at a large and constantly increasing number of creameries in other States.

The method of preparing and preserving composite samples which was originated and has been developed and tested by Prof. G. E. Patrick of the Iowa Station, has not, so far as we know, been practiced in this State, but it is in successful use elsewhere.

This Station will gladly coöperate with any creamery which may wish to adopt or try the method.

CORRECTION.

In the last Report of this Station, page 29, F. S. Bidwell, Windsor Locks, is named as selling Shoemaker's Swift Sure Bone Meal at \$32.00 per ton. Mr. Bidwell was not an agent for the sale of that brand, the price of which is \$38.00 and not \$32.00.

MIXED COMMERCIAL FERTILIZERS.

NITROGENOUS SUPERPHOSPHATES.

Here are included all such superphosphates as are not designed by the manufacturer for use on some special crop.

Since dry fish is often treated with a little oil of vitriol, thus making part of the phosphoric acid soluble in water, all the samples of this material have been analyzed as superphosphates and tabulated here.

All the analyses have been made on samples drawn by the agents of this Station during the season of 1891.

These analyses together with those of "Special Manures" given further on accurately represent the quality of the factory-mixed fertilizers in our market at the present time. The analyses of nitrogenous superphosphates are tabulated on pages 10 to 23. Attention is here called to some points which specially concern purchasers and consumers.

THE GUARANTEES.

The law of Connecticut requires every package of fertilizer to bear a statement of the actual composition of the goods. This usually expresses the quantities of nitrogen, phosphoric acid and potash within certain limits, as "nitrogen 2-4 per cent."

If a fertilizer with such a guarantee actually contains 2 per cent. of nitrogen, it is within the manufacturer's guarantee.

It is the lowest figures of the guarantee therefore that purchasers should regard.

Of the fifty-seven brands here reported fourteen are below their minimum guarantee in respect of one ingredient, and six in respect of two ingredients. That is, one-third of all the nitrogenous superphosphates in our market contain less of one or of several ingredients than they are claimed to contain.

It may be urged that an excess of one ingredient over the guarantee should be held to make good the deficiency of another. But with reasonable care and skill in the manufacture and in the sampling and analysis of the goods the actual analysis should not fall below the minimum guaranteed in any respect particularly when such wide limits are allowed in the guarantees themselves.

THE ACTUAL CHEMICAL COMPOSITION.

The different brands differ greatly in composition.

Below are given the highest and lowest percentages of each ingredient and also the average composition of the nitrogenous superphosphates.

The samples of dry ground fish, Peruvian guano and bone treated with oil of vitriol are not included in this table.

COMPOSITION OF NITROGENOUS SUPERPHOSPHATES. SEASON OF 1891.

| | Highest. | Lowest. | Average. |
|---------------------------------------|----------|---------|----------|
| Nitrogen as nitrates | 1.08 | 0 | .14 |
| “ “ ammonia | 2.55 | 0 | .28 |
| “ organic | 6.06 | .73 | 2.47 |
| Total Nitrogen | 6.06 | .73 | 2.89 |
| Soluble Phosphoric Acid | 10.51 | 1.31 | 5.71 |
| Reverted “ “ | 8.04 | 1.19 | 3.19 |
| Insoluble “ “ | 2.85 | .15 | 1.34 |
| Readily available Phosphoric Acid ... | 12.97 | 4.23 | 8.90 |
| Total “ “ ... | 14.78 | 5.19 | 10.24 |
| Potash | 9.95 | .93 | 3.48 |
| Chlorine | 7.88 | none | 3.35 |
| Cost per ton | \$45.00 | \$25.00 | \$33.97 |
| Valuation per ton | \$34.18 | \$16.74 | \$26.81 |

This table shows that the nitrogen in the nitrogenous superphosphates now in market varies from three-quarters of one per cent. to six per cent., phosphoric acid from five to fourteen and three-quarters per cent., and potash from less than one per cent. to ten.

It is evident that among the various brands there is a great difference in the quantity of actually valuable ingredients per ton and these differences must be studied by any one who would purchase economically.

A comparison of these tables with those of former years will also show that certain brands have about the same composition year after year, while others fluctuate considerably and cannot be depended on to be the same from year to year.

THE QUALITY OF THE FERTILIZING INGREDIENTS.

The efficiency of nitrogen, phosphoric acid and potash in fertilizers depends to a great degree on mechanical condition, state of combination and consequent solubility. The mechanical condition of the phosphates sold in this State is generally good. In no instance can it be called bad.

The *Potash* of these superphosphates is in all cases readily available, being freely soluble in water. Potash which is insoluble in water is not taken account of in any of our analyses.

The *Phosphoric Acid*, if “soluble,” that is, soluble in water, is equally available to plants whether derived from bone, bone black or rock phosphate.

Other things being equal it is generally best to choose a superphosphate in which most of the phosphoric acid is “soluble.”

On some soils soluble phosphoric acid has less good effect than reverted. The agricultural value of different forms of "reverted" phosphoric acid differs somewhat according to crop and soil, some of them being in certain cases quite as valuable as "soluble" phosphoric acid.

It is not advisable to purchase superphosphates in which any considerable portion of the phosphate is "insoluble." The insoluble phosphoric acid from Charleston rock or bone black is under most circumstances quite inert, that from fine-ground bone is more or less readily available, but it is impossible for the purchaser to distinguish one from the other in a mixed fertilizer.

It is quite impossible for the purchaser, and difficult and often impossible for the chemist to sharply distinguish between good and poor forms of *Organic Nitrogen*. That there are in market forms which are almost or quite inert as fertilizers is well known, and in buying goods ready-mixed the purchaser must trust in large measure to the business integrity of the firm with which he is dealing. This Station has devoted a good deal of time and study to the detection of inferior forms of nitrogen in mixed goods. No case of such fraud has yet been positively proved, although in one or two instances there has been reason for suspicion.

COST AND VALUATION.

Cost.

The method used to ascertain the retail cash price of the phosphates is as follows :

The sampling agents inquire and note the price at the time each sample is drawn. The analysis when done is reported to each dealer from whom a sample was taken with an enclosed postal card addressed to the Station, and a request to note on it whether the retail cash price is correctly given and to mail to the Station.

To each manufacturer is also sent a request that he will notify the Station regarding the probable average cash price at freight centers in Connecticut, of such brands as he sells in the State.

From these data the average prices are computed.

Valuation.

The Valuation of a Fertilizer as calculated at this Station represents the retail trade value or cash cost (in raw material of

good quality), of amounts of nitrogen, phosphoric acid and potash equal to these contained in one ton of the fertilizer.

The valuation is no attempt to fix a price at which one ought to sell or be able to buy a given fertilizer. Commercial mixed fertilizers are bought not for their name, or appearance or odor, but solely for the available nitrogen, phosphoric acid and potash contained in them. They can be most conveniently and accurately tested and compared *not* by the crops raised on neighboring plots fertilized with them but by chemical analysis coupled with a valuation which shall approximately represent what a purchaser would have to pay for a like quantity of the ingredients named, unmixed, in raw materials of good quality.

The valuation of mixed fertilizers must therefore generally fall below the retail prices. The difference between the two figures represents the manufacturer's charges for converting raw materials into manufactured articles and selling them. These charges are for grinding and mixing, bagging or barreling, storage and transportation, commission to agents and dealers, long credits, interest on investments, bad debts, and finally, profits.

Percentage Difference given in the last column of the table shows the percentage excess of the cost price over the average retail cost of the nitrogen, phosphoric acid and potash contained in the fertilizer.

This information puts the purchaser into a position where he can figure as to the probable relative value of the different brands and the probable relative economy of buying fertilizers mixed or unmixed.

Which method of buying is preferable can only be determined by each individual farmer who should know best what his soil and crops need and what his facilities for purchase and payment are.

No general rule can be given. In one case ready-mixed, in another, home-mixed fertilizers may be found the more profitable to use.

The average cost of the nitrogenous superphosphates as already given is \$33.97. The average valuation, \$26.81 and the percentage difference 26.7.

Last year the corresponding figures were :

Average cost \$33.80, Average valuation \$28.57, Percentage difference 25.5.

SPECIAL MANURES.

These are in nearly all cases nitrogenous superphosphates and are claimed to be particularly adapted to the uses of certain crops.

The analyses of thirty-seven different brands are given in the following tables. The samples were in all cases drawn by agents of the Station. The analyses are tabulated on pages 24 to 35.

GUARANTEES.

Eleven brands are below the maker's guarantee in respect of one ingredient, two in respect of two ingredients, and one brand is below in all three.

ACTUAL COMPOSITION.

Below are given the highest and lowest percentage of each ingredient found in any special manure as well as their average composition.

COMPOSITION OF SPECIAL MANURES.

| | Highest. | Lowest. | Average. |
|-----------------------------------|----------|---------|----------|
| Nitrogen as nitrate | 5.08 | none. | .62 |
| " " ammonia | 3.90 | none. | .85 |
| " organic | 3.90 | none. | 2.25 |
| Total nitrogen | 6.90 | 1.15 | 3.72 |
| Soluble Phosphoric Acid | 7.65 | none. | 5.05 |
| Reverted " " | 9.16 | 1.13 | 2.77 |
| Insoluble " " | 7.56 | .11 | 1.57 |
| Readily available Phosph. Acid .. | 10.36 | 4.38 | 7.82 |
| Total | 16.72 | 5.36 | 9.39 |
| Potash | 11.66 | 1.54 | 6.74 |
| Cost per ton | \$50.00 | \$33.00 | \$38.70 |
| Valuation per ton | \$46.35 | \$21.42 | \$31.28 |

A comparison of the average composition of these special manures with that of the other nitrogenous superphosphates shows the former to contain, on the whole, considerably more nitrogen, nearly twice as much potash and somewhat less phosphoric acid than the latter.

COST, VALUATION AND PERCENTAGE DIFFERENCE.

The average cost per ton of the special manures has been \$38.70, the average valuation, \$31.28 and the percentage difference 23.7, a little lower than in case of the nitrogenous superphosphates.

Last year the corresponding figures were: Average cost \$39.18, average valuation \$32.90, percentage difference 19.0.

HOME-MIXED FERTILIZERS.

Many farmers prefer to buy fertilizer-chemicals and mix them according to their own ideas of the requirements of their land and crops, and with the conviction that in the present state of the fertilizer trade they can buy nitrogen, phosphoric acid and potash more economically in this way than in any other.

The formulas of such home-mixtures as have been received at the Station and also the analyses are given in the tables on pages 36 to 40.

Since, in most cases, the stocks from which the chemicals were bought have been sampled and analyzed by the Station it is easy to calculate what the composition of the mixtures would have been if the goods had been perfectly uniform and the weighing and mixing accurate and thorough, without loss or gain of moisture.

This *calculated* composition is likewise given in the table.

The cost of the materials, *unmixed*, delivered at the purchaser's freight station is also given so far as could be ascertained.

The regular cash retail price of the materials is stated in each case. Special and considerably reduced rates were obtained in a number of cases.

The valuations were calculated as in the preceding tables.

CALCULATED AND ACTUAL COMPOSITION.

The calculated nitrogen in most cases agrees fairly well with the amount actually found. There are greater discrepancies in phosphoric acid and potash ; in most cases the actual phosphoric acid is less than calculated, and the potash more than calculated.

AVERAGE COMPOSITION OF HOME MIXTURES.

| | Highest. | Lowest. | Average. |
|---|----------|---------|----------|
| Nitrogen as nitrate | 2.95 | none. | .82 |
| " " ammonia | 1.97 | none. | .65 |
| " organic | 4.85 | 1.61 | 2.78 |
| Total nitrogen | 6.51 | 3.23 | 4.25 |
| Soluble phosphoric acid | 10.25 | .16 | 4.72 |
| Reverted " " | 6.33 | 1.53 | 3.83 |
| Insoluble " " | 5.11 | .55 | 2.53 |
| Total " " | 15.11 | 6.09 | 11.08 |
| Potash | 15.85 | 2.08 | 6.57 |
| Cost of materials per ton unmixed | \$39.60 | \$26.43 | \$34.82 |
| Valuation per ton | \$38.27 | \$30.28 | \$34.57 |

In the above table only those mixtures are regarded whose formulas are known.

Comparing the Home Mixtures with the Special Manures it is seen that the former contain on the average (fourteen analyses) half of a per cent. more nitrogen, over one and a half per cent. more phosphoric acid and slightly more of potash than the latter.

COST, VALUATION AND PERCENTAGE DIFFERENCE.

The average cost of the materials of which these mixtures were made, delivered, was \$34.82. To this must be added the cost of screening and mixing which is necessarily variable and is estimated by those who have had experience, at from one to two dollars per ton.

If the average cost of the *mixed* materials is placed at \$37.00 per ton it will probably fully cover all expense in every case.

On this basis the average cost of the Home Mixtures has been \$37.00, the average valuation \$34.82 and the percentage difference 6.2.

NITROGENOUS SUPERPHOSPHATES AND GUANOS SAMPLED BY THE STATION.

| Station No. | Name or Brand. | Manufacturer. | Dealer. | Dealers' cash price per ton. |
|-------------|------------------------------------|---|--------------------------------------|------------------------------|
| 3183 | Acidulated Fish Guano. | Leander Wilcox, Mystic, Conn. | H. K. Brainard, Thompsonville. | \$20.00 |
| 3136 | Dry Ground Fish. | L. Sanderson, New Haven, Conn. | Manufacturer. | 30.00 |
| 3344 | Pure Fine Dissolved Bone. | Mapes' Formula & Peruvian Guano Co., 143 Liberty St., New York. | Mapes' Branch, Hartford. | 32.00 |
| 3172 | Dry Ground Fish Guano. | Leander Wilcox, Mystic, Conn. | H. K. Brainard, Thompsonville. | 33.00 |
| | | | W. W. Cooper, Suffield. | 35.00 |
| 3253 | Pure Dry Ground Menhaden Guano, A. | Joseph Church & Co., Tiverton, R. I. | Manufacturer. | 30.00 |
| 3231 | Cumberland Bone Superphosphate. | Cumberland Bone Co., Portland, Me. | L. D. Post, Andover. | 30.00 |
| 3257 | Dry Ground Fish. | Bradley Fertilizer Co., 27 Kilby St., Boston, Mass. | D. W. Spencer, Centerbrook. | 32.00 |
| | | | J. B. Holmes, Stratford. | 38.00 |
| | | | W. F. Andross, E. Hartford. | 35.00 |
| 3232 | Bone, Fish and Potash. | E. R. Kelsey, Branford, Conn. | R. A. Parker, Warehouse Point. | 34.00 |
| | | | Wilson & Burr, Middletown. | 28.00 |
| | | | J. R. Barnes, Cheshire. | 25.00 |
| | | | Manufacturer. | 20.00 |
| 3320 | Sanderson's Formula A. | L. Sanderson, New Haven, Conn. | Manufacturer. | 35.00 |
| | | | E. A. A. twater, Cheshire. | 36.00 |
| 3213 | Dry Ground Fish. | Quinnipiac Co., 7 Exchange Place, Boston, Mass. | J. F. Silliman, New Canaan. | 36.00 |
| | | | P. & G. Williams, New London. | 40.00 |
| 3331 | Clittenden's Fish and Potash. | National Fertilizer Co., Bridgeport, Conn. | G. A. & H. B. Williams, E. Hartford. | 32.00 |
| | | | Prindle & Clark, W. Cheshire. | 33.00 |

NITROGENOUS SUPERPHOSPHATES AND GUANOS SAMPLED BY THE STATION—*Continued.*

| Station No. | Name or Brand. | Manufacturer. | Dealer. | Dealers' cash price per ton. |
|-------------|----------------------------------|---|--|------------------------------|
| 3255 | Standard C Brand Fertilizer. | Joseph Church & Co., Tiverton, R. I. | Manufacturer. | \$35.00 |
| 3254 | Special B Brand Fertilizer. | Joseph Church & Co., Tiverton, R. I. | Manufacturer. | 37.00 |
| 3336 | Swift Sure Superphosphate. | M. L. Shoemaker & Co., Philadelphia, Pa. | Wm. H. Filley, Windsor. | 40.00 |
| | | | J. P. Barstow & Co., Norwich. | 37.00 |
| | | | F. Ellsworth, Hartford. | 38.00 |
| 3321 | Genuine Peruvian Guano. | Mapes' Formula & Peruvian Guano Co., 143 Liberty St., New York. | Mapes' Conn. Valley Branch, Hartford. | 41.00 |
| 3291 | Complete Manure, A Brand. | Mapes' Formula & Peruvian Guano Co., 143 Liberty St., New York. | D. B. Wilson, Waterbury. | 36.00 |
| | | | Birdsey & Foster, Meriden. | 36.00 |
| | | | F. S. Bidwell, Windsor Locks. | 36.00 |
| | | | Quimnebaug Store, Danielsonville. | 37.00 |
| | | | Mapes' Conn. Valley Branch, Hartford. | 35.00 |
| | | | D. Beers, Danbury. | 36.00 |
| | | | Wilson & Burr, Middletown. | 36.00 |
| | | | A. N. Clark, Milford. | 37.00 |
| | | | Southington Lumber & Feed Co., South- ington. | 35.15 |
| | | | J. P. Barstow & Co., Norwich. | 36.00 |
| | | | Strong & Backus, Colchester. | 34.00 |
| 3288 | Complete Manure for General Use. | Mapes' Formula & Peruvian Guano Co., 143 Liberty St., New York. | Southington Lumber & Feed Co., South- ington. | 35.00 |
| | | | Mapes' Conn. Valley Branch, Hartford. | 38.00 |

NITROGENOUS SUPERPHOSPHATES AND GUANOS SAMPLED BY THE STATION—Continued.

| Station No. | Name or Brand. | Manufacturer. | Dealer. | Dealers' cash price per ton. |
|-------------|--|--|--------------------------------------|------------------------------|
| 3224 | Clittenden's Ammoniated Phosphate. | Bone National Fertilizer Co., Bridgeport, Conn. | W. L. Currier, Bridgeport. | \$35.00 |
| | | | E. P. Matherson, Promfret. | ---- |
| | | | E. B. Clark, Milford. | 30.00 |
| | | | G. A. & H. B. Williams, E. Hartford. | 32.00 |
| | | | F. L. Leighton & Co., Wallingford. | 35.00 |
| | | | Prindle & Clark, W. Cheshire. | 31.00 |
| | | | C. D. James, Danielsonville. | ---- |
| | | | J. S. Worthington, Gildersleeve. | ---- |
| | | | D. G. Penfield, Danbury. | 35.00 |
| | | | G. W. Eaton, Plainville. | 33.00 |
| 3248 | Bradley's Farmers New Method Fertilizer. | Bradley Fertilizer Co., 127 Kilby St., Boston, Mass. | J. E. Leonard, Jewett City. | 32.00 |
| | | | City Coal & Wood Co., New Britain. | 33.00 |
| | | | W. F. Andross, E. Hartford. | 33.00 |
| | | | D. N. Clark & Sons, Milford. | 29.00 |
| | | | G. W. Carver, Putnam. | 29.00 |
| | | | G. R. Fowler, Central Village. | 34.00 |
| | | | Carter & Strong, Manchester. | 34.00 |
| | | | D. W. Spencer, Centerbrook. | 34.00 |
| | | | J. M. Young, Norwich. | 30.00 |
| | | | R. D. Williams, Collinsville. | 32.00 |
| 3235 | A. A. Ammoniated Superphosphate. | H. J. Baker & Bro., 215 Pearl St., New York. | E. H. Talcott, Torrington. | 37.50 |
| | | | J. H. Ives, Danbury. | 37.50 |
| | | | A. L. Winton, Bridgeport. | 37.50 |
| | | | H. L. Foote, Brookfield Junction. | 37.50 |
| | | | G. W. Walker, Saybrook. | 37.50 |
| | | | E. F. Hawley, Newtown. | 37.50 |
| | | | W. F. Andross, E. Hartford. | 37.00 |

NITROGENOUS SUPERPHOSPHATES AND GUANOS SAMPLED BY THE STATION—Continued.

| Station No. | Name or Brand. | Manufacturer. | Dealer. | Dealers' cash price per ton. |
|-------------|------------------------------|---|---|---|
| 3262 | Lister's Standard Phosphate. | Lister's Agricultural Chemical Works, Newark, N. J. | W. H. Parmelee, Essex. | \$35.00 |
| 3174 | High Grade Fish and Potash. | Leander Wilcox, Mystic, Conn. | H. K. Brainard, Thompsonville. F. E. Fowler, Montville. Manufacturer. | 32.00 30.00 31.00 |
| 3334 | Pilgrim Fertilizer. | J. S. Reese & Co., 10 Broad St., Baltimore, Md. | H. F. Standish, Andover. Manufacturer. | 31.00 27.00 |
| 3175 | Ammoniated Bone Phosphate. | Leander Wilcox, Mystic, Conn. | A. H. Anderson, Putnam. Manufacturer. | 32.00 33.00 |
| 3312 | Animal Fertilizer. | L. B. Darling Fertilizer Co., Pawtucket, R. I. | J. W. Reynolds, Goodspeeds. City Coal & Wood Co., New Britain. W. W. Cooper, Suffolk. | 36.00 38.00 |
| 3333 | New England Favorite. | J. S. Reese & Co., 10 Broad St., Baltimore, Md. | Montgomery & Co., Groton. H. F. Standish, Andover. A. H. Anderson, Putnam. D. N. Medbury, Pomfret. | 30.00 32.00 35.00 35.00 |
| 3306 | Quinnipiac Phosphate. | Quinnipiac Co., 7 Exchange Place, Boston, Mass. | G. B. Whitehead, Green's Farms. J. F. Stillman, New Canaan. Candler & Morse, Putnam. G. M. Williams, New London. C. A. Young, Danielsonville. J. P. Little, Columbia. Olds & Whipple, Hartford. J. S. Worthington, Gildersleeve. A. J. Martin, Wallingford. D. C. Wood, Stratford. John Greenwood, Norwalk. | 36.00 38.00 35.00 35.00 37.00 36.00 38.00 35.00 35.00 37.00 38.00 |

NITROGENOUS SUPERPHOSPHATES AND GUANOS SAMPLED BY THE STATION—Continued.

| Station No. | Name or Brand. | Manufacturer. | Dealer. | Dealers' cash price per ton. |
|-------------|---------------------------|---|---|--|
| 3241 | Bradley's Superphosphate. | Bradley Fertilizer Co., 27 Kilby St., Boston, Mass. | Dix & Wells, Wethersfield. T. F. Powers, Waterford. Strong & Tanner, Winsted. D. Beers, Danbury. Peck Bros., Northfield. S. A. Billings, Meriden. City Coal & Wood Co., New Britain. Quinnebaug Store, Danielsonville. J. E. Leonard, Jewett City. D. N. Clark, Shelton. Wheeler & Howe, Bridgeport. F. S. Bidwell, Windsor Locks. Burtiss & Mead, New Canaan. Warner, Taylor & Curtiss, Sandy Hook. D. W. Spencer, Centerbrook. J. E. Comstock, New London. A. L. Sternberg, Hartford. Carter & Strong, Manchester. Waterbury & June, Greenwich. H. C. A born & Co., Ellington. G. R. Fowler, Central Village. John Wells, Hebron. R. A. Parker, Warehouse Point. W. W. Cooper, Suffield. | \$35.00 34.00 35.00 36.00 35.00 38.00 35.00 36.00 36.00 35.00 37.00 34.00 38.00 36.00 38.00 36.00 35.00 --- 38.00 35.00 34.00 39.00 35.00 28.00 |
| 3227 | Fish and Potash, D Brand. | Joseph Church & Co., Tiverton, R. I. | | |

NITROGENOUS SUPERPHOSPHATES AND GUANOS SAMPLED BY THE STATION—Continued.

15

| Station No. | Name or Brand. | Manufacturer. | Dealer. | Dealers' cash price per ton. |
|-------------|--|---|---|---|
| 3325 | Americus Brand Ammoniated Bone Superphosphate. | Williams & Clark Fertilizer Co., 83 Fulton St., New York. | D. B. Wilson, Waterbury. Strong & Backus, Colchester. Geo. Beaumont, Wallingford. C. E. Stagg, Stratford. Daniel Morgan, Mystic. Joseph Roode, Griswold. H. K. Brainard, Thompsonville. John Wells, Hebron. J. H. Ray & Son, Greenwich. J. P. Little, Columbia. John Bransfield, Portland. Hale, Day & Co., South Manchester. H. L. Vibberts, Manchester. T. C. Greene, Torrington. J. P. Kingsley & Sons, Plainfield. G. R. Whitehead, Green's Farms. E. B. Clark, Milford. J. H. Jennings, Green's Farms. E. H. Wilson, Ellington. C. D. James, Danielsonville. G. H. & H. B. Williams, E. Hartford. D. G. Penfield, Danbury. J. S. Worthington, Gildersleeve. F. L. Leighton & Co., Wallingford. Prindle & Clark, W. Cheshire. S. D. Woodruff, Orange. David Fitzgerald, Stratford. W. W. Cooper, Suffield. | \$35.00 33.00 35.00 34.00 35.00 36.00 35.00 --- 32.00 36.00 38.00 36.00 40.00 37.00 33.00 40.00 39.00 --- 40.00 41.00 45.00 40.00 42.50 --- 38.00 42.00 38.00 |
| 3309 | Market Garden Phosphate. | Quinnipiac Co., 7 Exchange Place, Boston, Mass. | | |
| 3323 | Chittenden's Complete Fertilizer. | National Fertilizer Co., Bridgeport, Conn. | | |

NITROGENOUS SUPERPHOSPHATES AND GUANOS SAMPLED BY THE STATION—*Continued.*

| Station No. | Name or Brand. | Manufacturer. | Dealer. | Dealers' cash price per ton. |
|-------------|--------------------------|--|--|--|
| 3225 | May Flower Fertilizer. | J. S. Reese & Co., 10 Broad St., Baltimore, Md. | Waldo Tillinghast, Plainfield. H. F. Standish, Andover. H. H. Davenport, Pomfret. | \$30.00 29.00 --- |
| 3228 | High Grade Phosphate. | E. Frank Coe, 16 Burling Slip, New York. | A. H. Anderson, Putnam. C. H. Lounsbury, Seymour. J. Amidon, Wethersfield. Backus Bros., South Windham. Arnold Rudd, New London. W. C. Reynolds, Goodspeeds. D. N. Clark, Shelton. E. H. & F. W. Tillinghast, Central Village. H. L. Vibberts, Manchester. D. G. Penfield, Danbury. J. P. Barstow & Co., Norwiche. W. T. Andrew, Orange. I. W. Denison, Mystic. F. P. Burr & Co., Middletown. H. S. Hall, 2d, Wallingford. Rogers Bros., New London. E. J. Dickerman, Mt. Carmel. F. S. Bidwell, Windsor Locks. | 34.00 36.00 35.00 33.00 34.00 33.00 33.00 32.00 35.00 35.00 32.00 --- 32.00 32.00 38.00 32.50 32.50 33.00 |
| 3233 | Pelican Bone Fertilizer. | H. J. Baker & Bro., 215 Pearl St., New York. | | |
| 3247 | Sea Fowl Guano. | Bradley Fertilizer Co., 27 Kilby St., Boston, Mass. | | |
| 3304 | Soluble Pacific Guano. | W. D. Stewart & Co., 7 Exchange Place, Boston, Mass. | John Bransfield, Portland. R. H. Tucker, Saybrook. L. J. Grant, South Windsor. Edward Halladay, Suffield. W. F. Andross, E. Hartford. P. J. Bolan, Waterbury. | 38.00 35.00 36.00 36.00 36.00 35.00 |

NITROGENOUS SUPERPHOSPHATES AND GUANOS SAMPLED BY THE STATION—*Continued.*

| Station No. | Name or Brand. | Manufacturer. | Dealer. | Dealers' cash price per ton. |
|----------------------------|--|---|--|---|
| 3318 | Ammoniated Bone Fertilizer. | Bowker Fertilizer Co., 43 Chatham St., Boston, Mass. | J. E. Leonard, Jewett City. E. M. Brewster, Norwich. N. E. Smith, Woodmont. Waldo Tillinghast, Plainfield. Strong & Backus, Colchester. J. E. Holmes, Ridgefield. | \$32.00 32.00 30.00 33.00 31.00 44.00 |
| 3299 3246 | Vegetable Phosphate. Fish and Potash, Triangle A Brand. | Crocker Fertilizer Co., Buffalo, N. Y. Bradley Fertilizer Co., 27 Kilby St., Boston, Mass. | G. W. Grant, South Windsor. R. A. Parker, Warehouse Point. D. N. Clark, Shelton. Carter & Strong, Manchester. | 32.00 30.00 40.00 33.00 |
| 3317 | Hill and Drill Phosphate. | Bowker Fertilizer Co., Boston, Mass. | J. M. Williams, Manchester. M. A. Covell, North Grosvenordale. E. F. Miller, Ellington. City Coal & Wood Co., New Britain. J. H. Fish, Newington. W. F. Andross, E. Hartford. B. Curtiss & Son, Stepney. J. H. Larned, Pomfret. M. McNamara, New Milford. E. M. Brewster, Norwich. F. Hallock & Co., Birmingham. | 34.00 34.00 34.00 36.00 36.00 37.00 37.00 36.00 36.00 38.00 34.00 |

NITROGENOUS SUPERPHOSPHATES AND GUANOS SAMPLED BY THE STATION—Continued.

| Station No. | Name or Brand. | Manufacturer. | Dealer. | Dealers' cash price per ton. |
|-------------|--|---|--|---|
| 3297 | Ammoniated Bone Phosphate. | Crocker Fertilizer Co., Buffalo, N. Y. | Prindle & Clark, W. Cheshire. H. C. Aborn, Ellington. G. W. Clark, Milford. F. N. Barton, Watertown. J. P. Little, Columbia. E. W. Peck, Stratford. John Bransfield, Portland H. L. Vibberts, Manchester. C. A. Young, Danielsonville. J. E. Leouard, Jewett City. H. C. Aborn, Ellington. | ----- \$34.00 ----- 36.00 37.00 38.00 ----- 37.00 36.00 35.00 30.00 |
| 3245 | Fish and Potash, Anchor Brand. | Bradley Fertilizer Co., 27 Kilby St., Boston, Mass. | | |
| 3311 | Fish and Potash, Plain Brand. | Quinnipiac Co., 7 Exchange Place, Boston, Mass. | A. J. Martin, Wallingford. M. O. Babcock, Branford. | 27.00 32.00 |
| 3264 | High Grade Farmer's Friend Fertilizer. | Read Fertilizer Co., Box 3121, New York. | Prior & Tryon, Middletown. Howard Ives, Cheshire. | 40.00 42.00 |
| 3229 | Alkaline Bone. | E. Frank Coe, 16 Burling Slip, New York. | Backus Bros., South Windham. | 30.00 |
| 3308 | Pine Island Phosphate. | Quinnipiac Co., 7 Exchange Place, Boston, Mass. | C. H. Lounsbury, Seymour. Olin Wheeler, South Windsor. Olds & Whipple, Hartford. | 32.00 ----- 35.00 |

NITROGENOUS SUPERPHOSPHATES AND GUANOS SAMPLED BY THE STATION—Continued.

| Station No. | Name or Brand. | Manufacturer. | Dealer. | Dealers' cash price per ton. |
|-------------|--|---|---|------------------------------|
| 3303 | New Rival Phosphate. | Crocker Fertilizer Co., Buffalo, New York. | W. L. L. Spencer, Lebanon. J. A. Weed, New Canaan. | \$32.00 40.00 |
| 3320 | Gold Brand Excelsior Guano. | E. Frank Coe, 16 Burling Slip, New York. | M. A. Covell, North Grosvenordale. F. N. Barton, Watertown. | 32.00 32.00 |
| 3256 | Fish and Potash. | Read Fertilizer Co., Box 3121, New York. | D. G. Penfield, Danbury. J. Amidon, Wethersfield. | 40.00 39.00 |
| 3263 | Standard Phosphate. | Read Fertilizer Co., Box 3121, New York. | Arnold Rudd, New London. Howard Ives, Cheshire. | 40.00 30.00 |
| 3330 | Special Favorite Fertilizer. | Read Fertilizer Co., Box 3121, New York. | Prior & Tryon, Middletown. Prior & Tryon, Middletown. | 28.00 30.00 |
| 3310 | Fish and Potash, Crossed Fishes Brand. | Davidge Fertilizer Co., 121 Front St., New York. Quinnipiac Co., Boston, Mass. | Howard Ives, Cheshire. J. M. Burke, South Manchester. Waldo Tillinghast, Plainfield. | 32.00 34.00 37.00 |
| 3328 | Royal Bone Phosphate. | Williams & Clark Fertilizer Co., 83 Fulton St., New York. | M. A. Covell, North Grosvenordale. M. O. Babcock, Braintree. Olin Wheeler, South Windsor. | 30.00 36.00 38.00 |
| 3358 | Acme Fertilizer, No. 2. | Acme Fertilizer Co., Maspeth, L. I. | J. F. Siliman, New Canaan. Olds & Whipple, Hartford. | 36.00 30.00 |
| 3237 | Economical Bone Fertilizer. | Wilkinson & Co., 81 Fulton St., New York. | John Bransfield, Portland. Dale, Day & Co., South Manchester. | 30.00 45.00 |
| 3301 | Practical Ammoniated Bone Phosphate. | Crocker Fertilizer Co., Buffalo, N. Y. | D. R. Hubbard, Guilford. W. H. Harris, Woodstock. W. L. L. Spencer, Lebanon. | 32.00 31.00 |

ANALYSES OF NITROGENOUS SUPERPHOSPHATES SAMPLED BY THE STATION.

| Station No. | Name or Brand. | Nitrogen. | | | | Phosphoric Acid. | | | | | | Potash. | | Chlorine. | Cost per Ton. | Valuation per Ton. | Percentage Difference between Cost and Valuation. |
|-------------|--------------------------------------|-----------------------|----------------------|-------------------|-----------------------|----------------------|----------|-----------|------------|--------------|-------------------|------------------|-------------|-----------|---------------|--------------------|---|
| | | Nitrogen as Nitrates. | Nitrogen as Ammonia. | Nitrogen Organic. | Total Nitrogen Found. | Nitrogen Guaranteed. | Soluble. | Reverted. | Insoluble. | Total Found. | Total Guaranteed. | Found Available. | Guaranteed. | | | | |
| 3183 | L. Wilcox's Acidulated Fish Guano | --- | .80 | 4.95 | 5.75 | --- | 1.42 | 2.58 | .63 | 4.63 | --- | 4.00 | --- | --- | \$20.00 | \$24.67 | *18.9 |
| 3136 | L. Sanderson's Dry Ground Fish | --- | --- | 8.59 | 8.59 | 6.6 | .75 | 3.37 | 2.98 | 7.10 | 6.0 | 4.12 | --- | --- | 30.00 | 34.08 | *11.9 |
| 3344 | Mapes' Pure Fine Dissolved Bone | --- | --- | 2.82 | 2.82 | 2.1 | 4.88 | 12.19 | 2.36 | 19.43 | --- | 17.07 | 12.0 | --- | 32.00 | 35.79 | *10.6 |
| 3172 | L. Wilcox's Dry Ground Fish Guano | --- | --- | 8.90 | 8.90 | 8.0 | .67 | 3.43 | 3.09 | 7.19 | 6.0 | 4.10 | 4.0 | --- | 32.00 | 35.04 | *8.6 |
| 3253 | Church's Dry Ground Menhaden Guano | --- | --- | 8.68 | 8.68 | 8.2 | .59 | 3.84 | 3.10 | 7.53 | 8.0 | 4.43 | --- | --- | 34.00 | 34.85 | *2.5 |
| 3234 | Cumberland Bone Superphosphate | .30 | --- | 2.25 | 2.55 | 2.5 | 5.79 | 7.18 | 1.81 | 14.78 | --- | 12.97 | 12.0 | 1.29 | 30.00 | 30.74 | *2.4 |
| 3257 | Bradley's Dry Ground Fish | --- | --- | 8.57 | 8.57 | 7.4 | .61 | 3.64 | 3.36 | 7.61 | 7.0 | 4.25 | --- | --- | 34.50 | 34.36 | .4 |
| 3232 | Kelsey's Bone, Fish and Potash | --- | .74 | 3.41 | 4.15 | 3.3 | 3.07 | 2.10 | .38 | 5.55 | 4.0 | 5.17 | --- | .22 | 25.00 | 24.76 | 1.0 |
| 3320 | Sanderson's Formula A | 1.08 | .69 | 2.43 | 4.20 | 3.3 | 6.69 | 3.48 | .15 | 10.32 | 10.0 | 10.17 | 6.0 | 4.32 | 35.00 | 34.18 | 2.4 |
| 3213 | Quinnipiac Co.'s Dry Ground Fish | --- | .26 | 8.33 | 8.59 | 7.4 | .48 | 4.15 | 2.60 | 7.23 | 7.0 | 4.63 | 4.0 | --- | 36.00 | 34.82 | 3.3 |
| 3331 | Chittenden's Fish and Potash | --- | .46 | 4.38 | 4.84 | 3.3 | 3.60 | 2.79 | 1.31 | 7.70 | 6.0 | 6.39 | --- | 4.91 | 32.50 | 31.27 | 3.9 |
| 3255 | Church's Standard C Brand Fertilizer | --- | .32 | 3.70 | 4.02 | 3.3 | 6.80 | 2.64 | .92 | 10.36 | 10.0 | 9.44 | --- | 1.68 | 35.00 | 31.94 | 9.6 |
| 3254 | Church's Special B Brand | --- | --- | 6.06 | 6.06 | 4.9 | 3.46 | 2.91 | 1.42 | 7.79 | 12.0 | 6.37 | --- | 5.40 | 37.00 | 33.71 | 9.7 |

* Valuation exceeds cost.

ANALYSES OF NITROGENOUS SUPERPHOSPHATES SAMPLED BY THE STATION—Continued.

| Station No. | Name or Brand. | Nitrogen. | | | | Phosphoric Acid. | | | | | | | Potash. | | Chlorine. | Cost per Ton. | Valuation per Ton. | Percentage Difference Between Cost and Valuation. | |
|-------------|--|-----------------------|----------------------|--------------------|-----------------------|------------------|----------|-----------|------------|--------------|------------|-------------|---------|-------------|-----------|---------------|--------------------|---|------|
| | | Nitrogen as Nitrates. | Nitrogen as Ammonia. | Nitrogen, Organic. | Total Nitrogen Found. | Guaranteed. | Soluble. | Reverted. | Insoluble. | Total Found. | Available. | | Found. | Guaranteed. | | | | | |
| | | | | | | | | | | | Found. | Guaranteed. | | | | | | | |
| 3336 | Shoemaker's Swift Sure Superphosphate | .80 | --- | 2.25 | 3.05 | 2.5 | 7.38 | 4.36 | 2.40 | 14.14 | 14.0 | 11.74 | 9.0 | 4.76 | 4.0 | none | \$38.00 | \$33.85 | 12.2 |
| 3321 | Mapes' Genuine Peruvian Guano | --- | 1.83 | .97 | 2.80 | 3.3 | 3.38 | 8.92 | 9.90 | 22.20 | 23.0 | 12.30 | --- | 3.09 | 3.0 | 2.03 | 41.00 | 35.39 | 15.9 |
| 3291 | Mapes' Complete Manure, A Brand | .64 | .60 | 1.79 | 3.03 | 2.5 | 8.48 | 2.86 | 1.63 | 12.97 | 12.0 | 11.34 | 10.0 | 3.21 | 2.5 | 3.04 | 36.00 | 31.03 | 16.0 |
| 3288 | Mapes' Complete Manure for General Use | .62 | 1.00 | 2.06 | 3.68 | 3.3 | 6.72 | 3.54 | 1.38 | 11.64 | --- | 10.26 | 8.0 | 4.42 | 4.0 | 2.47 | 38.00 | 32.70 | 16.2 |
| 3324 | Chittenden's Ammoniated Bone Phosphate | --- | --- | 2.52 | 2.52 | 1.7 | 6.88 | 3.75 | 1.95 | 12.58 | 9.0 | 10.63 | 7.0 | 2.58 | 2.0 | 1.25 | 33.00 | 27.73 | 19.0 |
| 3248 | Bradley's Farmers' New Method Fertilizer | --- | --- | 2.38 | 2.38 | 1.7 | 7.20 | 2.97 | 1.95 | 12.12 | 10.0 | 10.17 | 8.0 | 3.03 | 3.0 | 2.75 | 32.00 | 26.87 | 19.1 |
| 3235 | Baker's A.A. Ammoniated Superphosphate | trace | 1.85 | .96 | 2.81 | 2.5 | 10.51 | 1.27 | .38 | 12.16 | 11.0 | 11.78 | 10.0 | 2.83 | 2.0 | 3.86 | 37.50 | 31.25 | 20.0 |
| 3262 | Lister's Standard Phosphate | --- | .46 | 2.07 | 2.53 | 2.1 | 7.89 | 4.14 | 2.45 | 14.48 | 12.0 | 12.03 | 10.0 | 1.09 | 1.5 | .23 | 35.00 | 29.97 | 20.4 |
| 3174 | Wilcox's High Grade Fish and Potash | --- | .45 | 3.45 | 3.90 | 3.3 | 3.52 | 2.17 | .73 | 6.42 | 6.0 | 5.69 | 5.0 | 4.63 | 4.0 | 7.74 | 31.00 | 25.70 | 20.7 |
| 3331 | Reese's Pilgrim Fertilizer | --- | --- | 1.53 | 1.53 | 1.0 | 2.88 | 8.04 | .40 | 11.32 | 7.5 | 10.92 | 6.5 | 2.51 | --- | 2.23 | 29.00 | 23.83 | 21.7 |
| 3175 | Wilcox's Ammoniated Bone Phosphate | --- | .39 | 3.47 | 3.86 | 3.3 | 4.19 | 2.16 | .74 | 7.09 | 7.0 | 6.35 | 6.0 | 5.32 | 5.0 | 6.21 | 33.00 | 27.12 | 21.7 |
| 3312 | Darling's Animal Fertilizer | .38 | --- | 3.31 | 3.69 | 3.3 | 4.54 | 3.57 | 1.54 | 9.65 | 10.0 | 8.11 | --- | 5.47 | 4.0 | 5.30 | 36.00 | 29.52 | 21.9 |
| 3333 | Reese's New England Fertilizer | --- | --- | 2.72 | 2.72 | 2.4 | 4.03 | 6.23 | .37 | 10.63 | 11.0 | 10.26 | 9.0 | 1.84 | 2.0 | 2.33 | 32.00 | 26.04 | 22.9 |
| 3306 | Quinnipiac Phosphate | .08 | --- | 2.97 | 3.05 | 2.5 | 6.81 | 3.73 | 1.66 | 12.20 | 10.0 | 10.54 | 9.0 | 1.99 | 2.0 | 1.88 | 35.00 | 28.39 | 23.3 |
| 3241 | Bradley's Superphosphate | .18 | --- | 2.59 | 2.77 | 2.5 | 7.82 | 3.17 | 1.36 | 12.35 | 11.0 | 10.99 | 9.0 | 2.20 | 2.0 | 1.65 | 35.00 | 28.34 | 23.5 |

ANALYSES OF NITROGENOUS SUPERPHOSPHATES SAMPLED BY THE STATION—Continued.

| Station No. | Name or Brand. | Nitrogen. | | | | | | Phosphoric Acid. | | | | Potash. | | Chlorine. | Cost per Ton. | Valuation per Ton. | Percentage Difference between Cost and Valuation. |
|-------------|--|-----------------------|----------------------|--------------------|-----------------------|----------------------|----------|------------------|------------|--------------|-------------------|---------|-------------|-----------|---------------|--------------------|---|
| | | Nitrogen as Nitrates. | Nitrogen as Ammonia. | Nitrogen. Organic. | Total Nitrogen Found. | Nitrogen Guaranteed. | Soluble. | Reverted. | Insoluble. | Total Found. | Total Guaranteed. | Found. | Guaranteed. | | | | |
| 3227 | Church's Fish and Potash. | --- | --- | 4.18 | 4.18 | 2.3 | 1.31 | 2.92 | .96 | 5.19 | 5.0 | 4.23 | --- | 5.44 | \$28.00 | \$22.60 | 23.9 |
| 3325 | Americus Ammoniated Bone Phosphate | .08 | --- | 2.75 | 2.83 | 2.5 | 7.28 | 3.73 | .72 | 11.73 | 10.0 | 11.01 | 9.0 | 1.58 | 35.00 | 28.14 | 24.4 |
| 3309 | Quimpicac Market Garden Phosphate | .26 | .64 | 2.48 | 3.38 | 3.3 | 6.03 | 1.95 | .50 | 8.48 | 9.0 | 7.98 | 8.0 | 7.83 | 7.0 | 31.86 | 25.5 |
| 3323 | Chittenden's Complete Fertilizer | .57 | --- | 2.77 | 3.34 | 3.3 | 4.56 | 5.80 | 2.56 | 12.92 | 8.0 | 10.36 | 6.0 | 6.22 | 6.0 | 32.86 | 26.3 |
| 3335 | Reese's Mayflower Fertilizer | --- | --- | 2.02 | 2.02 | 1.8 | 3.25 | 7.62 | .45 | 11.32 | 10.0 | 10.87 | 8.5 | 1.57 | 2.3 | 24.48 | 26.6 |
| 3228 | E. F. Coe's High Grade Phosphate | --- | .60 | 1.72 | 2.32 | 2.0 | 7.87 | 2.22 | 2.05 | 12.14 | 11.0 | 10.09 | 9.0 | 2.41 | 3.0 | 26.84 | 26.7 |
| 3233 | Baker's Pelican Bone Fertilizer | --- | 1.27 | .91 | 2.18 | 1.8 | 8.46 | 1.19 | .26 | 9.91 | 9.0 | 9.65 | 8.0 | 2.85 | 2.3 | 25.53 | 27.3 |
| 3247 | Bradley's Sea Fowl Guano | --- | --- | 2.42 | 2.42 | 2.5 | 6.90 | 2.92 | 1.93 | 11.75 | 11.0 | 9.82 | 9.0 | 2.41 | 2.0 | 25.87 | 27.5 |
| 3304 | Stewart's Soluble Pacific Guano | .11 | .23 | 2.44 | 2.78 | 2.3 | 7.13 | 2.69 | 1.52 | 11.34 | 10.5 | 9.82 | 8.5 | 2.76 | 2.0 | 27.30 | 28.2 |
| 3318 | Bowker's Ammoniated Bone Fertilizer | .58 | --- | 1.63 | 2.21 | 2.0 | 7.30 | 2.38 | 1.62 | 11.30 | 10.0 | 9.68 | 8.0 | 2.05 | 2.0 | 24.48 | 30.7 |
| 3299 | Crocker's Vegetable Phosphate | --- | .12 | 4.85 | 4.97 | 5.0 | 4.56 | 2.00 | 1.13 | 7.69 | 7.0 | 6.56 | 6.0 | 8.24 | 6.0 | 33.65 | 30.7 |
| 3246 | Bradley's Fish and Potash, Triangle A Brand. | --- | --- | 2.97 | 2.97 | 2.0 | 4.50 | 2.02 | 1.66 | 8.18 | 6.0 | 6.52 | 4.0 | 3.75 | 4.0 | 23.49 | 32.0 |
| 3317 | Bowker's Hill and Drill Phosphate | .87 | --- | 1.97 | 2.84 | 2.5 | 8.00 | 2.48 | 1.76 | 12.24 | 12.0 | 10.48 | 8.0 | 2.37 | 2.0 | 27.98 | 32.2 |
| 3297 | Crocker's Ammoniated Bone Phosphate | --- | 2.88 | 2.88 | 2.88 | 2.9 | 5.17 | 5.07 | 2.66 | 12.90 | 11.0 | 10.24 | 10.0 | .93 | 1.0 | 35.50 | 32.9 |

ANALYSES OF NITROGENOUS SUPERPHOSPHATES SAMPLED BY THE STATION—Continued.

| Station No. | Name or Brand. | Nitrogen. | | | | | | Phosphoric Acid. | | | | | | Potash. | | Chlorine. | Cost per Ton. | Valuation per Ton. | Percentage Difference between Cost and Valuation. |
|-------------|--|-----------------------|----------------------|-------------------|-----------------------|----------------------|----------|------------------|------------|--------------|-------------------|--------|-------------|---------|-------------|-----------|---------------|--------------------|---|
| | | Nitrogen as Nitrates. | Nitrogen as Ammonia. | Nitrogen Organic. | Total Nitrogen Found. | Nitrogen Guaranteed. | Soluble. | Reverted. | Insoluble. | Total Found. | Total Guaranteed. | Found. | Guaranteed. | Found. | Guaranteed. | | | | |
| 3245 | Bradley's Fish and Potash, Anchor Brand..... | --- | --- | 3.53 | 3.53 | 2.2 | 2.99 | 2.97 | 2.18 | 8.14 | 5.0 | 5.96 | 3.0 | 3.29 | 3.0 | 5.32 | \$32.00 | \$24.01 | 33.5 |
| 3311 | Quinnipiac Fish and Potash, Plain Brand..... | --- | --- | 2.87 | 2.87 | 2.0 | 3.23 | 2.39 | 1.26 | 6.88 | 6.0 | 5.62 | 4.0 | 3.81 | 4.0 | 6.40 | 29.00 | 21.60 | 34.2 |
| 3264 | Read's High Grade Farmer's Friend | --- | --- | 3.22 | 3.22 | 3.3 | 4.24 | 1.90 | 1.18 | 7.32 | --- | 6.14 | 5.0 | 9.95 | 10.0 | 7.46 | 40.00 | 29.05 | 37.6 |
| 3229 | E. Frank Coe's Alkaline Bone | --- | --- | 1.07 | 1.07 | 1.0 | 7.56 | 2.99 | 1.73 | 12.28 | 9.0 | 10.55 | 9.0 | 1.74 | 3.0 | .25 | 31.00 | 22.44 | 38.1 |
| 3308 | Quinnipiac Pine Island Phosphate | --- | .23 | 2.36 | 2.59 | 2.1 | 6.02 | 2.97 | 1.15 | 10.14 | 10.0 | 8.99 | 9.0 | 1.37 | 1.0 | 1.39 | 34.00 | 23.95 | 41.9 |
| 3303 | Crocker's New Rival Phosphate | --- | --- | 1.51 | 1.51 | 1.2 | 6.06 | 3.89 | 1.82 | 11.77 | 11.0 | 9.95 | 10.0 | 1.41 | 1.6 | 2.40 | 32.00 | 22.22 | 44.0 |
| 3230 | E. F. Coe's Excelsior Guano, Gold Brand | --- | 1.27 | 1.04 | 2.31 | 2.5 | 6.45 | 2.68 | 1.94 | 11.07 | 9.0 | 9.13 | 8.0 | 4.75 | 6.0 | 1.79 | 40.00 | 27.79 | 43.9 |
| 3256 | Read's Fish and Potash..... | --- | --- | 2.59 | 2.59 | 2.5 | 3.39 | 1.66 | .77 | 5.82 | 6.0 | 5.05 | 4.0 | 4.30 | 4.0 | 5.86 | 29.00 | 20.12 | 44.1 |
| 3263 | Read's Standard Phosphate..... | trace | --- | 1.13 | 1.13 | 0.8 | 7.20 | 1.40 | .51 | 9.11 | 10.0 | 8.60 | 8.0 | 4.23 | 4.0 | 6.28 | 31.00 | 21.14 | 46.6 |
| 3330 | Davidge Special Favorite | --- | --- | 1.64 | 1.64 | 1.2 | 8.35 | 2.59 | .19 | 11.13 | 11.0 | 10.94 | 10.0 | 1.60 | 1.5 | 1.52 | 35.00 | 23.86 | 46.7 |
| 3310 | Quinnipiac Fish and Potash, Crossed Fishes Brand | --- | --- | 3.43 | 3.43 | 3.3 | 2.88 | 2.61 | 1.79 | 7.28 | 5.0 | 5.49 | 3.0 | 3.64 | 3.0 | 5.80 | 34.00 | 23.16 | 46.8 |
| 3328 | Williams & Clark's Royal Bone Phosphate..... | --- | --- | 1.09 | 1.09 | 1.0 | 6.56 | 2.60 | 1.15 | 10.31 | 8.0 | 9.16 | 7.0 | 1.71 | 2.0 | .85 | 30.00 | 19.90 | 50.8 |
| 3358 | Acme Fertilizer, No. 2..... | --- | 2.55 | 1.47 | 4.02 | 4.9 | 3.92 | 2.20 | 2.86 | 8.97 | 8.0 | 6.12 | --- | 4.88 | 5.0 | 4.45 | 45.00 | 29.09 | 54.7 |
| 3237 | Wilkinson's Economical Bone Fertilizer | --- | --- | 1.07 | 1.07 | 2.1 | 4.70 | 2.15 | .67 | 7.52 | 6.0 | 6.85 | --- | 2.67 | 3.0 | 5.60 | 27.00 | 16.74 | 61.5 |
| 3301 | Crocker's Practical Ammoniated Bone Phosphate | --- | --- | .73 | .73 | 0.8 | 5.69 | 3.43 | 1.95 | 11.07 | 9.0 | 9.12 | 8.0 | 1.41 | 1.0 | 1.39 | 31.00 | 18.56 | 67.0 |

SPECIAL MANURES SAMPLED BY THE STATION.

| Station No. | Name or Brand. | Manufacturer. | Dealer. | Dealers' cash price per ton. |
|-------------|--|---|--|---|
| 3260 | Fairchild's Formula for Corn and General Crops. | Rogers & Hubbard Co., Middletown, Conn. | Strong & Backus, Colchester. | \$44.00 |
| 3322 | Seeding Down Manure. | Mapes' Formula & Peruvian Guano Co., 143 Liberty St., New York. | Mapes' Conn. Valley Branch, Hartford. | 37.50 |
| 3314 | Stockbridge Manure for Tobacco. | Bowker Fertilizer Co., 43 Chatham St., Boston, Mass. | H. K. Brainard, Thompsonville. | 50.00 |
| 3287 | Grass and Grain Spring Top Dressing. | Mapes' Formula & Peruvian Guano Co., New York. | F. S. Bidwell, Windsor Locks. Strong & Backus, Colchester. G. K. Nason, Willimantic. | 40.00 39.00 39.00 |
| 3289 | Manure for Fruit and Vines. | Mapes' Formula & Peruvian Guano Co., New York. | Mapes' Conn. Valley Branch, Hartford. Soule & Staub, New Milford. | 39.00 41.00 |
| 3259 | Soluble Potato Manure. | Rogers & Hubbard Co., Middletown, Conn. | Mapes' Conn. Valley Branch, Hartford. E. N. Pierce & Co., Plainville. A. E. Kilburn, East Hartford. G. L. Foskett, Winsted. | 38.00 40.00 37.00 37.00 |
| 3292 | Complete Manure for Light Soils, or Vegetable Manures. | Mapes' Formula & Peruvian Guano Co., 143 Liberty St., New York. | City Coal & Wood Co., New Britain. Strong & Backus, Colchester. Daniel Moriarty, South Meriden. | 36.00 37.00 42.00 |
| 3173 | Potato Manure. | Leander Wilcox, Mystic, Conn. | Mapes' Conn. Valley Branch, Hartford. Wilson & Burr, Middletown. G. K. Nason, Willimantic. Birdsey & Foster, Meriden. J. P. Barstow & Co., Norwich. Manufacturer. J. M. Young, Norwich. W. C. Reynolds, Goodspeeds. C. M. Smith, East Hartford. J. A. Lewis, Willimantic. | 43.00 42.00 42.00 43.00 34.00 35.00 32.00 36.00 30.00 |

SPECIAL MANURES SAMPLED BY THE STATION—Continued.

| Station No. | Name or Brand. | Manufacturer. | Dealer. | Dealers' cash price per ton. |
|-------------|--------------------------------------|---|---|------------------------------|
| 3171 | C. C. Special Potato Manure. | Chemical Co. of Canton, Baltimore, Md. | G. L. Foskett, Winsted. | \$35.00 |
| 3240 | High Grade Tobacco Manure. | Bradley Fertilizer Co., 27 Kilby St., Boston, Mass. | A. C. Sternberg, Hartford. | 46.00 |
| 3261 | Lister's Potato Fertilizer. | Lister's Agricultural Chemical Works, Newark, N. J. | E. P. Carroll, East Hartford. | 37.00 |
| 3282 | Concentrated Potato and Corn Manure. | J. S. Reese & Co., 10 Broad St., Baltimore, Md. | H. F. Standish, Andover. | 34.00 |
| 3289 | Special Tobacco Manure. | H. J. Baker & Bro., 215 Pearl St., New York. | Montgomery & Co., Groton. | 32.00 |
| 3285 | Corn Manure. | Mapes' Formula & Peruvian Guano Co., New York. | E. F. Hawley, Newtown. | 42.00 |
| | | | L. J. Grant, South Windsor. | 40.00 |
| | | | F. S. Bidwell, Windsor Locks. | 40.00 |
| | | | W. W. Cooper, Suffield. | 41.00 |
| | | | D. B. Wilson, Watertown. | 41.00 |
| | | | G. K. Nason, Willimantic. | 39.00 |
| | | | W. A. Benton, Guilford. | 40.00 |
| | | | Mapes' Branch, Hartford. | 39.00 |
| | | | W. R. Foote, Branford. | 40.00 |
| | | | Southington Lumber & Feed Co., Southington. | 40.00 |
| 3286 | Corn Manure. | Mapes' Formula & Peruvian Guano Co., New York. | E. N. Pierce & Co., Plainville. | 40.00 |
| 3290 | Tobacco Manure, Conn. Brand. | Mapes' Formula & Peruvian Guano Co., New York. | D. Beers, Danbury. | 39.00 |
| | | | Mapes' Branch, Hartford. | 44.00 |

SPECIAL MANURES SAMPLED BY THE STATION—Continued.

| Station No. | Name or Brand. | Manufacturer. | Dealer. | Dealers' cash price per ton. |
|-------------|--|--|---|------------------------------|
| 3243 | Complete Manure for Potatoes and Vegetables. | Bradley Fertilizer Co., Boston, Mass. | J. F. Ellwood, Southport. | \$38.00 |
| | | | R. A. Parker, Warehouse Point. | 36.00 |
| | | | Strong & Tanner, Winsted. | 40.00 |
| | | | J. A. Lewis, Willimantic. | 40.00 |
| | | | W. H. Cheney's Sons, South Manchester. | 42.00 |
| | | | Dix & Welles, Wethersfield. | 40.00 |
| | | | City Coal & Wood Co., New Britain. | 41.00 |
| | | | Carter & Strong, Manchester. | 42.00 |
| | | | E. F. Hawley, Newtown. | 42.50 |
| | | | H. L. Foote, Brookfield Junction. | 42.00 |
| 3238 | Potato Manure. | H. J. Baker & Bro., 215 Pearl St., New York. | J. H. Ives, Danbury. | 42.00 |
| | | | A. L. Winton, Bridgeport. | 42.00 |
| | | | E. H. Talcott, Torrington. | 42.00 |
| | | | Rodgers Bros., New London. | 40.50 |
| | | | W. F. Andross, East Hartford. | 40.00 |
| | | | E. J. Dickerman, Mt. Carmel. | 42.50 |
| | | | Mapes' Branch, Hartford. | 48.00 |
| 3286 | Tobacco Manure, Wrapper Brand. | Mapes' Formula & Peruvian Guano Co., New York. | Southington Lumber & Feed Co., Southington. | 47.50 |
| | | | F. S. Bidwell, Windsor Locks. | 49.00 |
| | | | Soule & Staub, New Milford. | 50.00 |

SPECIAL MANURES SAMPLED BY THE STATION—Continued.

| Station No. | Name or Brand. | Manufacturer. | Dealer. | Dealers' cash price per ton. |
|-------------|---|--|---|---|
| 3293 | Potato Manure. | Mapes' Formula & Peruvian Guano Co., New York. | W. R. Foote, Branford. F. S. Bidwell, Windsor Locks. Quinnebaug Store, Danielsonville. Wheeler & Howe, Bridgeport. C. W. Beardsley, Milford. Southington Lumber & Feed Co., Southington. E. N. Pierce & Co., Plainville. Wilson & Burr, Middletown. A. N. Clark, Milford. Soule & Staub, New Milford. Mapes' Branch, Hartford. Strong & Backus, Colchester. J. P. Barstow & Co., Norwich. Raymond Bros., South Norwalk. Abbott & Co., Birmingham. D. B. Wilson, Waterbury. City Coal & Wood Co., New Britain. | \$42.00 42.00 43.00 45.00 42.00 40.50 42.00 42.00 43.00 43.00 41.00 41.00 42.00 43.00 40.00 43.00 38.00 |
| 3313 | Potato and Root Crop Manure. | L. B. Darling Fertilizer Co., Pawtucket, R. I. | | |
| 3327 | High Grade Special for Potatoes, Tobacco, Onions and Cabbage. | Williams & Clark Co., 83 Fulton St., New York. | John Bransfield, Portland. Hale, Day & Co., South Manchester. L. J. Grant, South Windsor. | 40.00 40.00 40.00 |

SPECIAL MANURES SAMPLED BY THE STATION—Continued.

| Station No. | Name or Brand. | Manufacturer. | Dealer. | Dealers' cash price per ton. |
|-------------|---|--|---|------------------------------|
| 3279 | Great Eastern Vegetable, Vine and Tobacco Fertilizer. | Great Eastern Fertilizer Co., Rutland, Vt. | W. A. Boufoey, Higganum. | \$35.00 |
| | | | S. D. Woodruff, Orange. | 35.00 |
| | | | F. W. Goodrich, Portland. | ---- |
| | | | Wm Burr & Son, Fairfield. | 34.00 |
| | | | Way & Sanderson, Pomfret. | 36.00 |
| | | | G. H. Law, Killingly. | 32.00 |
| | | | Waldo Tillinghast, Plainfield. | 40.00 |
| | | | Lewis Browning, New London. | 42.50 |
| | | | E. J. Dickerman, Mt. Carmel. | 43.00 |
| | | | J. A. Lewis, Willimantic. | 40.00 |
| 3315 | Stockbridge Manure for Corn. | Bowker Fertilizer Co., Boston, Mass. | J. A. Paine, Danielsonville. | 40.00 |
| | | | A. H. Anderson, Putnam. | 42.00 |
| | | | H. E. Mead, Ridgefield. | 45.00 |
| | | | E. F. Miller, Ellington. | 38.00 |
| | | | W. A. Beers, Brookfield Junction. | ---- |
| | | | J. H. Larned, Pomfret. | 42.00 |
| | | | City Coal & Wood Co., New Britain. | 41.00 |
| | | | J. M. Williams, Manchester. | 40.00 |
| | | | F. H. & F. W. Tillinghast, Central Village. | 40.00 |
| | | | H. L. Vibberts, Manchester. | 40.00 |
| 3300 | Special Potato Manure. | Crocker Fertilizer Co., Buffalo, N. Y. | Waldo Tillinghast, Plainfield. | 37.00 |
| | | | E. W. Peck, Stratford. | 40.00 |
| | | | G. W. Clark, Milford. | ---- |
| | | | City Coal & Wood Co., New Britain. | 39.00 |
| | | | E. J. Dickerman, Mt. Carmel. | 41.00 |
| | | | Prindle & Clark, West Cheshire. | 37.00 |

SPECIAL MANURES SAMPLED BY THE STATION—*Continued.*

| Station No. | Name or Brand. | Manufacturer. | Dealer. | Dealers' cash price per ton. |
|-------------|---|---|--|---|
| 3278 | Great Eastern Grain and Grass Fertilizer. | Great Eastern Fertilizer Co., Rutland, Vt. | Wm. Burr & Son, Fairfield. W. A. Snow, Columbia. G. H. Law, Killingly. | \$23.00 35.00 32.00 |
| 3244 | Complete Manure for Corn and Grain. | Bradley Fertilizer Co., 27 Kilby St., Boston, Mass. | Way & Sanderson, Pomfret. Carter & Strong, Manchester. J. E. Holmes, Stratford. D. N. Clark & Sons, Milford. | 36.00 42.00 40.00 38.00 |
| 3316 | Stockbridge Manure for Potatoes and Vegetables. | Bowker Fertilizer Co., Boston, Mass. | F. S. Bidwell, Windsor Locks. Southington Lumber & Feed Co., Southington. | 42.00 40 50 |
| | | | A. S. Russell & Co., Meriden. E. B. Clark, Milford. E. J. Dickerman, Mt. Carmel. City Coal & Wood Co., New Britain. N. E. Smith, Woodmont. | 45.00 39.00 43.00 41.00 40.00 |

SPECIAL MANURES SAMPLED BY THE STATION—Continued.

| Station No. | Name or Brand. | Manufacturer. | Dealer. | Dealers' cash price per ton. |
|----------------------------|--|---|------------------------------------|------------------------------|
| 3298 | Potato, Tobacco and Hop phosphate. | Crocker Fertilizer Co., Buffalo, N. Y. | H. T. Hart, Burnside. | \$36.00 |
| | | | J. E. Leonard, Jewett City. | 35.00 |
| | | | W. L. L. Spencer, Lebanon. | 38.00 |
| | | | M. H. Aborn & Co., Rockville. | 34.00 |
| | | | E. W. Peck, Stratford. | 37.00 |
| | | | F. N. Barton, Watertown. | 36.00 |
| | | | G. W. Clark, Milford. | --- |
| | | | W. C. Russell, Orange. | 33.00 |
| | | | J. A. Weed, New Canaan. | 37.00 |
| | | | J. P. Little, Columbia. | 38.00 |
| 3305 | Soluble Pacific Potato Fertilizer. | W. D. Stewart & Co., 7 Exchange Place, Boston, Mass. | P. J. Bolan, Waterbury. | 35.00 |
| | | | R. H. Tucker, Saybrook. | 35.00 |
| | | | D. R. Hubbard, Guilford. | 38.00 |
| | | | J. P. Kingsley, Plainfield. | 33.00 |
| | | | Chas. Kingsbury, South Coventry. | 37.00 |
| | | | Hale, Day & Co., South Manchester. | 36.00 |
| | | | Geo. Beaumont, Wallingford. | 35.00 |
| | | | Daniel Morgan, Mystic. | 35.00 |
| | | | L. L. Dimmock, Waterford. | 36.00 |
| | | | Joseph Roode, Griswold. | 36.00 |
| 3357 3326 | Potato Fertilizer, Conn. Brand. Potato Phosphate. | Acme Fertilizer Co., Maspeth, L. I. Williams & Clark Fertilizer Co., New York. | T. C. Smith, Torrington. | 40.00 |
| | | | H. L. Vibberts, Manchester. | 38.00 |
| | | | D. B. Wilson, Waterbury. | 36.00 |
| | | | H. K. Brinard, Thompsonville. | 38.00 |
| | | | A. H. Anderson, Putnam. | 36.00 |

SPECIAL MANURES SAMPLED BY THE STATION—Continued.

| Station No. | Name or Brand. | Manufacturer. | Dealer. | Dealers' cash price per ton. |
|-------------|--------------------------------------|---|---|------------------------------|
| 3302 | Ammoniated Wheat and Corn Phosphate. | Crocker Fertilizer Co., Buffalo, N. Y. | F. N. Barton, Watertown. | \$35.00 |
| | | | M. H. Aborn & Co., Rockville. | 34.00 |
| | | | J. E. Leonard, Jewett City. | 32.00 |
| | | | Henry Davis, Durham. | 32.00 |
| | | | W. C. Russell, Orange. | 33.00 |
| | | | J. E. Holmes, Ridgefield. | 35.00 |
| | | | Erindle & Clark, West Cheshire. | ---- |
| | | | Waldo Tillinghast, Plainfield. | 33.00 |
| | | | G. W. Clark, Milford. | ---- |
| | | | F. H. & F. W. Tillinghast, Central Village. | 34.00 |
| | | | H. L. Vibberts, Manchester. | 35.00 |
| | | | W. L. L. Spencer, Lebanon. | 36.00 |
| 3307 | Potato Manure. | Quinnipiac Co., 7 Exchange Place, Boston, Mass. | E. W. Peck, Stratford. | 36.00 |
| | | | D. N. Medbury, Pomfret. | 36.00 |
| | | | F. S. Bidwell, Windsor Locks. | 36.00 |
| | | | M. A. Covell, North Grosvornordale. | 34.00 |
| | | | A. J. Martin, Wallingford. | 35.00 |
| | | | C. E. Young, Killingly. | 35.00 |
| | | | C. A. Young, Danielsonville. | 38.00 |
| | | | G. M. Williams, New London. | 35.00 |
| | | | Olds & Whipple, Hartford. | 40.00 |
| | | | J. S. Worthington, Gildersleeve. | ---- |
| | | | D. C. Wood, Stratford. | 38.00 |

SPECIAL MANURES SAMPLED BY THE STATION—Continued.

| Station No. | Name or Brand. | Manufacturer. | Dealer. | Dealers' cash price per ton. |
|-------------|--|---|---|---|
| 3242 | Potato Manure. | Bradley Fertilizer Co., 27 Kilby St., Boston, Mass. | Warner, Taylor & Curtiss, Sandy Hook. J. S. Wells, Helbron. G. W. Carver, Putnam. H. C. A born, Ellington. A. C. Sternberg, Hartford. F. S. Bidwell, Windsor Locks. D. W. Spencer, Centerbrook. D. N. Clark, Shelton. J. E. Leonard, Jewett City. Samuel Stevens, North Glastonbury. City Coal & Wood Co., New Britain. Strong & Tanner, Winsted. W. F. Andross, Hartford. T. F. Powers, Waterford. Dix & Welles, Wethersfield. J. E. Holmes, Stratford. D. N. Clark & Sons, Milford. R. A. Parker, Warehouse Point. Howard Ives, Cheshire. | \$36.00 39.00 34.00 36.00 36.00 38.00 38.00 40.00 37.00 ----- 37.00 36.00 36.00 35.00 35.00 38.00 34.00 35.00 40.00 |
| 3276 | Samson Fertilizer for Vegetables and Potatoes. | Read Fertilizer Co., Box 3121, New York. | | |
| 3258 | Complete Manure for Top Dressing Grass and Grain. | Bradley Fertilizer Co., Boston, Mass. | G. W. Grant, South Windsor. | 40.00 |
| 3277 | Great Eastern Fertilizer for Oats, Buckwheat and Seeding Down. | Great Eastern Fertilizer Co., Rutland, Vt. | W. A. Snow, Columbia. Way & Sanderson, Pomfret. J. E. Comstock, New London. | 35.00 34.00 32.00 |

ANALYSES OF SPECIAL MANURES SAMPLED BY THE STATION.

| Station No. | Name or Brand. | Nitrogen. | | | | | Phosphoric Acid. | | | | Potash. | | Chlorine. | Cost per Ton. | Valuation. | Percentage Difference between Cost and Valuation. |
|-------------|--|-----------------------|----------------------|-------------------|-----------------------|----------------------|------------------|-----------|------------|--------------|-------------------|--------|-------------|---------------|------------|---|
| | | Nitrogen as Nitrates. | Nitrogen as Ammonia. | Nitrogen Organic. | Total Nitrogen Found. | Nitrogen Guaranteed. | Soluble. | Reverted. | Insoluble. | Total Found. | Total Guaranteed. | Found. | Guaranteed. | | | |
| 3260 | Fairchild's Formula for Corn and General Crops | 3.70 | --- | 1.91 | 5.61 | 5.5 | --- | --- | --- | 12.28 | 12.0 | 13.46 | 12.0 | \$44.00 | 44.80 | *1.8 |
| 3322 | Mapes' Manure for Seeding Down | .83 | --- | 2.76 | 3.59 | 2.5 | --- | 9.16 | 7.56 | 16.72 | 18.0 | 11.43 | 10.0 | 37.50 | 38.03 | 1.4 |
| 3314 | Stockbridge Manure for Tobacco | --- | 3.57 | 3.47 | 6.90 | 5.7 | --- | 5.37 | 3.97 | 9.34 | 5.0 | 11.66 | 10.0 | 50.00 | 46.35 | 7.8 |
| 3287 | Mapes' Grass and Grain Spring Top Dressing | .99 | 1.52 | 2.60 | 5.11 | 4.1 | 6.45 | 2.36 | .58 | 9.39 | 7.0 | 6.14 | 5.0 | 39.00 | 36.17 | 7.8 |
| 3289 | Mapes' Manure for Fruit and Vines | .45 | .89 | 1.63 | 2.97 | 1.7 | 5.65 | 2.41 | 1.15 | 9.21 | 7.0 | 11.45 | 10.0 | 38.00 | 35.20 | 7.9 |
| 3259 | Rogers & Hubbard's Soluble Potato Manure | 1.57 | --- | 3.90 | 5.47 | 5.0 | 1.14 | 5.68 | 3.32 | 10.14 | 10.0 | 5.17 | 5.0 | 37.00 | 33.84 | 9.3 |
| 3292 | Mapes' Complete Manure for Light Soils | 1.44 | 1.65 | 2.15 | 5.24 | 4.9 | 6.27 | 2.57 | .64 | 9.48 | 8.0 | 7.11 | 6.0 | 42.00 | 37.51 | 11.9 |
| 3173 | Leander Wilcox's Potato Manure | .67 | .25 | 2.63 | 3.55 | 3.2 | 6.19 | 1.16 | .11 | 7.46 | 8.0 | 5.97 | 6.0 | 33.00 | 28.83 | 14.4 |
| 3171 | C. C. C. Special Potato Manure | .58 | --- | 2.27 | 2.85 | 2.7 | 6.08 | 1.22 | .75 | 8.05 | --- | 7.30 | 6.0 | 35.00 | 30.51 | 14.7 |
| 3240 | Bradley's High Grade Tobacco Manure | --- | 3.53 | 2.53 | 6.06 | 5.8 | 2.03 | 2.35 | 1.38 | 5.76 | 4.0 | 11.02 | 10.8 | 46.00 | 40.01 | 15.0 |
| 3261 | Lister's Potato Fertilizer | 1.03 | .74 | 2.25 | 4.02 | 3.7 | 6.61 | 1.34 | .52 | 8.47 | --- | 7.95 | 7.5 | 37.00 | 32.01 | 15.6 |
| 3332 | Reese's Concentrated Potato and Corn Manure | trace | --- | 3.17 | 3.17 | 3.0 | 4.28 | 4.13 | .29 | 8.70 | 7.0 | 6.14 | 7.5 | 33.00 | 28.53 | 15.7 |
| 3239 | Baker's Special Tobacco Manure | --- | 3.90 | .87 | 4.77 | 4.5 | 3.41 | 1.13 | .82 | 5.36 | --- | 9.87 | 10.0 | 41.00 | 35.27 | 16.2 |

* Valuation exceeds cost.

† A mixture of bone flour and chemicals. Phosphoric acid valued as in bone of same fineness.

ANALYSES OF SPECIAL MANURES SAMPLED BY THE STATION—Continued.

| Station No. | Name or Brand. | Nitrogen. | | | | | Phosphoric Acid. | | | | | | Potash. | | Chlorine. | Cost per Ton. | Valuation. | Percentage Differ- ence between Cost and Valua- tion. | |
|-------------|--|--------------------------|-------------------------|-----------------------|----------------------------|----------------------|------------------|-----------|------------|--------------|----------------------|------------|------------------|-------|-----------|---------------|------------|--|------|
| | | Nitrogen as Nitrates. | Nitrogen as Ammonia. | Nitrogen, Organic. | Total Nitro- gen Found. | Nitrogen Guaranteed. | Soluble. | Reverted. | Insoluble. | Total Found. | Total Guaranteed. | Available. | | | | | | | |
| | | | | | | | | | | | | Found. | Guar- anteed. | | | | | | |
| 33285 | Mapes' Corn Manure | .84 | .95 | 1.99 | 3.78 | 3.7 | 6.43 | 3.46 | 1.35 | 11.24 | 10.0 | 9.89 | 8.0 | 6.62 | 6.0 | 6.15 | \$40.00 | \$34.10 | 17.3 |
| 33286 | Mapes' Corn Manure | .99 | 1.06 | 1.86 | 3.91 | 3.7 | 6.27 | 3.49 | 1.41 | 11.17 | 10.0 | 9.76 | 8.0 | 6.30 | 6.0 | 5.80 | 40.00 | 34.06 | 17.5 |
| 33290 | Mapes' Tobacco Manure, Conn. Brand | .60 | 1.65 | 2.49 | 4.74 | 4.7 | 5.23 | 2.95 | .67 | 8.85 | --- | 8.18 | 7.8 | 8.08 | 7.7 | 1.00 | 44.00 | 37.28 | 18.0 |
| 33243 | Bradley's Complete Manure for Potatoes and Vegeta- bles | | | | | | | | | | | | | | | | | | |
| 33238 | Baker's Potato Manure | .33 | 1.23 | 2.20 | 3.76 | 3.7 | 7.01 | 1.90 | 1.45 | 10.36 | 9.0 | 8.91 | 8.0 | 5.36 | 6.0 | 5.95 | 38.00 | 31.78 | 19.5 |
| 33286 | Mapes' Tobacco Manure, Wrapper Brand | .41 | 2.63 | .88 | 3.92 | 3.3 | 4.91 | 1.62 | .89 | 7.42 | --- | 6.53 | 5.0 | 10.73 | 10.0 | 4.40 | 42.50 | 34.93 | 21.7 |
| 33293 | Mapes' Potato Manure | 1.13 | 3.45 | 1.47 | 6.05 | 6.2 | .72 | 3.96 | 1.75 | 6.43 | 4.5 | 4.68 | 4.5 | 10.36 | 10.5 | 1.31 | 48.00 | 39.44 | 21.7 |
| 33313 | Darling's Potato and Root Crop Manure | .89 | .87 | 2.24 | 4.00 | 3.3 | 5.52 | 2.79 | 1.28 | 9.59 | 8.0 | 8.31 | 8.0 | 7.45 | 6.0 | .54 | 42.00 | 34.32 | 22.4 |
| 33327 | Williams & Clark's High Grade Special for Potatoes, Tobacco, Onions and Cab- bage | .41 | .34 | 3.16 | 3.81 | 2.9 | 2.85 | 4.80 | 2.78 | 10.43 | --- | 7.65 | 10.0 | 6.46 | 7.0 | 5.25 | 38.00 | 30.93 | 22.9 |
| 33279 | Great Eastern Vegetable, Vine and Tobacco Fertilizer | .46 | .85 | 2.30 | 3.61 | 3.7 | 5.60 | 3.35 | 1.92 | 10.87 | 8.0 | 8.95 | 7.0 | 6.63 | 7.0 | 6.79 | 40.00 | 32.34 | 23.7 |
| 33315 | Bowker's Stockbridge Man- ure for Corn | .17 | --- | 2.08 | 2.25 | 2.1 | 6.40 | 1.97 | 1.16 | 9.53 | 9.0 | 8.37 | 8.0 | 6.29 | 6.0 | 6.00 | 34.00 | 26.26 | 29.4 |
| 33300 | Crocker's Special Potato Manure | 1.37 | --- | 1.95 | 3.32 | 3.3 | 7.52 | 2.49 | 1.50 | 11.51 | 9.0 | 10.01 | 8.0 | 4.31 | 7.0 | 4.03 | 40.00 | 30.27 | 32.1 |
| 33278 | Great Eastern Grain and Grass Fertilizer | --- | .19 | 3.27 | 3.46 | 3.7 | 6.59 | 1.16 | 1.14 | 8.89 | 9.0 | 7.75 | 8.0 | 6.47 | 5.5 | 6.16 | 39.00 | 29.40 | 32.7 |
| | | .23 | --- | 2.78 | 3.01 | 2.9 | 6.88 | 1.78 | .74 | 9.40 | 9.0 | 8.66 | 8.0 | 2.22 | 2.0 | 3.32 | 34.00 | 25.57 | 32.9 |

ANALYSES OF SPECIAL MANURES SAMPLED BY THE STATION—Continued.

| Station No. | Name or Brand. | Nitrogen. | | | | | | Phosphoric Acid. | | | | | | Potash. | | Chlorine. | Cost per Ton. | Valuation. | Percentage Difference between Cost and Valuation. |
|-------------|--|-----------------------|----------------------|-------------------|-----------------------|----------------------|----------|------------------|------------|--------------|-------------------|--------|-------------|---------|-------------|-----------|---------------|------------|---|
| | | Nitrogen as Nitrates. | Nitrogen as Ammonia. | Nitrogen Organic. | Total Nitrogen Found. | Nitrogen Guaranteed. | Soluble. | Reverted. | Insoluble. | Total Found. | Total Guaranteed. | Found. | Guaranteed. | Found. | Guaranteed. | | | | |
| 3244 | Bradley's Complete Manure for Corn and Grain----- | .23 | .49 | 2.35 | 3.07 | 2.9 | 7.65 | 2.71 | 1.03 | 11.39 | 9.0 | 10.36 | 8.0 | 3.71 | 3.0 | 3.93 | \$40.00 | \$29.83 | 34.1 |
| 3316 | Stockbridge Manure for Potatoes and Vegetables---- | 1.97 | --- | 1.80 | 3.77 | 3.3 | 4.61 | 2.17 | 2.75 | 9.53 | 8.0 | 6.78 | 7.0 | 6.99 | 5.0 | 5.19 | 40.00 | 29.34 | 36.3 |
| 3398 | Crocker's Potatoes, Tobacco and Hop Phosphate----- | --- | --- | 2.25 | 2.25 | 2.0 | 6.80 | 2.93 | 1.87 | 11.60 | 11.0 | 9.73 | 10.0 | 3.41 | 3.5 | 3.80 | 36.00 | 26.08 | 38.0 |
| 3305 | Stewart's Soluble Pacific Potato Fertilizer----- | --- | --- | 2.82 | 2.82 | 2.5 | 4.75 | 2.35 | 1.92 | 9.02 | 7.0 | 7.10 | 5.0 | 5.23 | 5.0 | 4.92 | 35.00 | 25.35 | 38.0 |
| 3357 | Acme Fertilizer Co's Conn. Brand for Potatoes----- | --- | 1.52 | 1.41 | 2.93 | 3.3 | 4.19 | 1.83 | 2.59 | 8.61 | 7.0 | 6.02 | --- | 7.80 | 7.0 | 7.15 | 38.00 | 27.50 | 38.1 |
| 3326 | Williams & Clark Fertilizer | trace | --- | 2.87 | 2.87 | 2.5 | 5.23 | 2.48 | 1.12 | 8.83 | 7.0 | 7.71 | 6.0 | 5.02 | 5.0 | 3.81 | 36.00 | 25.96 | 38.7 |
| 3302 | Co's Potato Phosphate----- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 3302 | Crocker Ammoniated Wheat and Corn Phosphate----- | .05 | --- | 2.10 | 2.15 | 2.0 | 7.15 | 2.81 | 1.92 | 11.88 | 11.0 | 9.96 | 10.0 | 1.54 | 1.7 | 2.45 | 34.00 | 24.48 | 38.9 |
| 3307 | Quinnipiac Potato Manure---- | --- | --- | 2.84 | 2.84 | 2.5 | 4.85 | 2.51 | 1.28 | 8.64 | 7.0 | 7.36 | 6.0 | 5.27 | 5.0 | 4.33 | 36.00 | 25.58 | 40.7 |
| 3342 | Bradley's Potato Manure---- | .20 | --- | 2.62 | 2.82 | 2.5 | 4.74 | 2.50 | 1.72 | 8.96 | 8.0 | 7.24 | 6.0 | 4.94 | 5.0 | 4.82 | 36.00 | 25.17 | 43.0 |
| 3276 | Read's Samson Fertilizer for Vegetables and Potatoes---- | --- | --- | 2.25 | 2.25 | 2.5 | 7.09 | 1.70 | .67 | 9.46 | 9.0 | 8.79 | 8.0 | 6.84 | 5.0 | 6.28 | 40.00 | 27.30 | 46.5 |
| 3258 | Bradley's Complete Manure for Top Dressing Grass and Grain----- | 5.08 | --- | --- | 5.08 | 5.0 | 2.69 | 2.36 | 1.42 | 6.47 | 6.0 | 5.05 | 5.0 | 3.03 | 2.5 | .40 | 40.00 | 26.37 | 51.6 |
| 3277 | Great Eastern Fertilizer for Oats, Buckwheat and Seeding Down----- | trace | --- | 1.15 | 1.15 | .8 | 7.20 | 1.44 | .65 | 9.29 | 9.0 | 8.64 | 8.0 | 4.34 | 4.0 | 5.78 | 33.00 | 21.42 | 54.1 |

FORMULAS OF THE HOME MIXTURES.

3125. Mixture made by S. E. Curtiss, Stratford.

FORMULA.

| | | | | |
|--------------|-----------------------|----------------------------|---------|----------|
| 3,200 pounds | Dissolved Bone Black, | costing | ----- | \$41.60 |
| 600 | " | Double Sulphate of Potash, | " ----- | 9.00 |
| 600 | " | Muriate of Potash, | " ----- | 12.75 |
| 800 | " | Nitrate of Soda, | " ----- | 20.00 |
| 2,800 | " | Tankage, | " ----- | 49.00 |
| <hr/> | | | | |
| 8,000 | | | | \$132.35 |

3153. Mixture for general use made by N. D. Platt, Milford.

FORMULA.

| | | | | |
|--------------|----------|----------------------------|---------|---------|
| 1,335 pounds | Tankage, | costing | ----- | \$24.03 |
| 1,333 | " | Dissolved Bone Black, | " ----- | 17.32 |
| 333 | " | Bone, | " ----- | 5.32 |
| 333 | " | Sulphate of Ammonia, | " ----- | 11.98 |
| 333 | " | Double Sulphate of Potash, | " ----- | 5.00 |
| 333 | " | Muriate of Potash, | " ----- | 7.09 |
| <hr/> | | | | |
| 4,000 | | | | \$70.74 |

Cost of materials \$36.37 per ton delivered at Milford.

3154. Mixture for Potatoes made by Geo. F. Platt, Milford.

FORMULA.

| | | | | |
|------------|----------|----------------------------|---------|---------|
| 800 pounds | Tankage, | costing | ----- | \$14.40 |
| 400 | " | Bone, | " ----- | 6.40 |
| 550 | " | Dissolved Bone Black, | " ----- | 7.15 |
| 50 | " | Sulphate of Ammonia, | " ----- | 1.80 |
| 100 | " | Nitrate of Soda, | " ----- | 2.50 |
| 50 | " | Double Sulphate of Potash, | " ----- | .75 |
| 50 | " | Muriate of Potash, | " ----- | 1.07 |
| <hr/> | | | | |
| 2,000 | | | | \$34.07 |

Cost of materials \$35.07 delivered at Milford.

3155. Mixture for Potatoes made by R. M. Treat, Woodmont.

FORMULA.

| | | | | |
|------------|----------|----------------------------|---------|---------|
| 450 pounds | Tankage, | costing | ----- | \$ 8.10 |
| 170 | " | Sulphate of Ammonia, | " ----- | 6.12 |
| 1,000 | " | Dissolved Bone Black, | " ----- | 13.00 |
| 280 | " | Muriate of Potash, | " ----- | 5.96 |
| 100 | " | Double Sulphate of Potash, | " ----- | 1.50 |
| <hr/> | | | | |
| 2,000 | | | | \$34.68 |

Cost of materials \$35.68 delivered at Woodmont.

3156. Mixture for Potatoes, made by Dennis Fenn, Milford.

FORMULA.

| | | | | |
|------------|-------------------------|---------|-------|---------|
| 350 pounds | Muriate of Potash, | costing | ----- | \$ 7.45 |
| 900 | " Dissolved Bone Black, | " | ----- | 11.70 |
| 1,400 | " Tankage, | " | ----- | 25.20 |
| 350 | " Nitrate of Soda, | " | ----- | 8.80 |
| <hr/> | | | | |
| 3,000 | | | | \$53.15 |

Materials cost \$36.43 delivered at Milford.

3160. Mixture for general use made by W. L. and S. T. Merwin, Milford.

FORMULA.

| | | | | |
|------------|--------------------------------|---------|-------|----------|
| 700 pounds | Muriate of Potash, | costing | ----- | \$14.91 |
| 3,400 | " Dissolved Bone Black, | " | ----- | 44.20 |
| 500 | " Tankage, | " | ----- | 9.00 |
| 700 | " Sulphate of Ammonia, | " | ----- | 2.52 |
| 500 | " Bone, | " | ----- | 8.00 |
| 2,200 | " Fish containing some potash, | " | ----- | 24.20 |
| <hr/> | | | | |
| 8,000 | | | | \$102.83 |

Materials cost \$26.43 delivered at Milford.

3188. Mixture for Oats, made by T. J. Stroud, Shaker Station.

FORMULA.

| | |
|------------|-------------------------|
| 800 pounds | Tankage. |
| 700 | " Castor Pomace. |
| 400 | " Nitrate of Soda. |
| 200 | " Muriate of Potash. |
| 100 | " Dissolved Bone Black. |
| 100 | " Plaster. |
| <hr/> | |
| 2,300 | |

3189. Mixture for Potatoes, made by T. J. Stroud, Shaker Station.

FORMULA.

| | |
|------------|------------------------------|
| 700 pounds | Tankage. |
| 500 | " Castor Pomace. |
| 50 | " Nitrate of Soda. |
| 400 | " Muriate of Potash. |
| 250 | " Double Sulphate of Potash. |
| 100 | " Dissolved Bone Black. |
| 100 | " Plaster. |
| <hr/> | |
| 2,100 | |

3191. Made by Dennis Fenn, Milford. It contains tankage, dissolved bone black, nitrate of soda and ashes. Exact proportions not known.

3205. Mixture made by H. S. Frye, Poquonock.

FORMULA.

| | | |
|----------------------------------|--------------|----------------|
| 4,000 pounds Cotton Seed Meal, | costing----- | \$49.00 |
| 1,200 " Dissolved Bone Black, | " ----- | 15.60 |
| 900 " Double Sulphate of Potash, | " ----- | 13.50 |
| 300 " Sulphate of Ammonia, | " ----- | 10.80 |
| 1,600 " Tankage, | " ----- | 28.80 |
| <hr/> 8,000 | | <hr/> \$117.70 |

Materials cost \$29.42 per ton delivered at Windsor.

3207. Mixture for Tobacco, made by A. E. Holcomb, Poquonock.

FORMULA.

| | | |
|----------------------------------|--------------|---------------|
| 150 pounds Sulphate of Ammonia, | costing----- | \$ 5.40 |
| 800 " Tankage, | " ----- | 14.40 |
| 600 " Dissolved Bone Black, | " ----- | 7.80 |
| 450 " Double Sulphate of Potash, | " ----- | 6.75 |
| <hr/> 2,000 | | <hr/> \$34.35 |

Materials cost \$36.15 per ton delivered at Poquonock.

3226. Mixture for Corn, made by Dennis Fenn, Milford.

FORMULA.

| | | |
|-----------------------------|--------------|---------------|
| 500 pounds Bone, | costing----- | \$ 8.00 |
| 200 " Muriate of Potash, | " ----- | 4.26 |
| 600 " Dissolved Bone Black, | " ----- | 7.80 |
| 500 " Tankage, | " ----- | 9.00 |
| 200 " Nitrate of Soda, | " ----- | 5.00 |
| <hr/> 2,000 | | <hr/> \$34.06 |

Materials cost \$35.06 per ton delivered at Milford.

3267 and **3268.** Mixtures made by J. M. Brown, Poquonock, formulas not given.

3273. Mixture for Corn, made by T. J. Stroud, Shaker Station.

FORMULA.

| | | |
|-------|--------|-----------------------|
| 800 | pounds | Castor Pomace. |
| 900 | " | Tankage. |
| 200 | " | Muriate of Potash. |
| 100 | " | Dissolved Bone Black. |
| 100 | " | Nitrate of Soda. |
| 100 | " | Plaster. |
| <hr/> | | |
| 2,200 | | |

3281. Mixture made by E. J. Wells, East Windsor Hill.

FORMULA.

| | | | | | |
|-------|--------|--------------------------------|---------|-------|---------|
| 150 | pounds | Sulphate of Ammonia, | costing | ----- | \$ 5.62 |
| 700 | " | Dissolved Bone Black, | " | ----- | 10.50 |
| 700 | " | Taukage, | " | ----- | 11.20 |
| 245 | " | High Grade Sulphate of Potash, | " | ----- | 6.86 |
| <hr/> | | | | | |
| 1,795 | | | | | \$34.18 |

Materials cost *about* \$39.60 delivered at East Windsor Hill.

3282. Mixture made by E. J. Wells, East Windsor Hill.

FORMULA.

| | | | | | |
|-------|--------|-----------------------|---------|-------|---------|
| 262 | pounds | Muriate of Potash, | costing | ----- | \$ 7.21 |
| 800 | " | Dissolved Bone Black, | " | ----- | 12.00 |
| 700 | " | Tankage, | " | ----- | 11.20 |
| 266 | " | Nitrate of Soda, | " | ----- | 7.32 |
| <hr/> | | | | | |
| 2,028 | | | | | \$37.73 |

Materials cost *about* \$38.73 per ton delivered at East Windsor Hill.

3283 and **3284.** Mixtures for general use made by H. G. Osborne, East Windsor Hill.

HOME MIXED FERTILIZERS.—ANALYSES AND VALUATIONS.

| Station No. | Name. | Nitrogen. | | | | Phosphoric Acid. | | | | Potash. | | Chlorine. | Valuation per Ton. | Cost of Raw Material per Ton. |
|-------------|--------------------------------------|--------------|-------------|----------|--------------|------------------|----------|-----------|------------|--------------|-------------|-----------|--------------------|-------------------------------|
| | | As Nitrates. | As Ammonia. | Organic. | Total Found. | Calculated. | Soluble. | Reverted. | Insoluble. | Total Found. | Calculated. | | | |
| 3125 | S. E. Curtiss, Home Mixture | 1.75 | --- | 1.85 | 3.60 | 3.9 | 6.40 | 2.32 | 1.32 | 10.04 | 10.9 | 3.79 | \$30.48 | \$34.09 |
| 3153 | N. D. Platt, Mixture for General Use | --- | 1.64 | 2.32 | 3.96 | 3.9 | 7.02 | 3.16 | 2.34 | 12.52 | 13.9 | 6.3 | 4.05 | 36.06 |
| 3154 | G. F. Platt, Mixture for Potatoes | .74 | .60 | 3.22 | 4.56 | 4.3 | 5.39 | 4.61 | 5.11 | 15.11 | 17.3 | 1.9 | 41 | 34.11 |
| 3155 | R. M. Treat, Mixture for Potatoes | --- | 1.60 | 1.63 | 3.23 | 3.0 | 10.25 | 1.53 | .56 | 12.34 | 12.5 | 8.4 | 6.14 | 35.77 |
| 3156 | Dennis Fenn, Mixture for Potatoes | 1.71 | --- | 3.06 | 4.77 | 4.5 | 5.79 | 3.29 | 2.68 | 11.76 | 13.9 | 5.9 | 5.46 | 34.91 |
| 3160 | W. L. & S. T. Merwin, Home Mixture | --- | 1.97 | 1.61 | 3.58 | 3.6 | 7.95 | 1.77 | .55 | 10.27 | 10.7 | 5.1 | 5.19 | 32.76 |
| 3188 | T. J. Stroud, Mixture for Oats | 2.95 | --- | 3.56 | 6.51 | 6.2 | .86 | 3.84 | 2.04 | 6.74 | 7.9 | 6.08 | --- | --- |
| 3189 | T. J. Stroud, Mixture for Potatoes | .32 | --- | 3.00 | 3.32 | 3.4 | .83 | 3.49 | 1.77 | 6.09 | 7.6 | 15.85 | 13.1 | 9.70 |
| 3191 | Dennis Fenn, Mixture for Potatoes | .94 | --- | 2.36 | 3.30 | --- | 1.31 | 3.51 | 5.07 | 9.89 | --- | 6.36 | --- | .54 |
| 3205 | H. S. Frye, Home Mixture | --- | .74 | 4.85 | 5.59 | 5.4 | 2.40 | 3.01 | 2.13 | 7.54 | 7.8 | 6.82 | 4.0 | 2.37 |
| 3207 | A. E. Holcomb, Home Mixture | --- | 1.06 | 2.20 | 3.26 | 3.6 | 5.81 | 4.17 | 2.75 | 12.73 | 13.2 | 5.90 | --- | 33.89 |
| 3226 | Dennis Fenn, Home Mixture | 1.45 | --- | 2.78 | 4.23 | 3.9 | 5.60 | 4.72 | 4.14 | 14.46 | 15.8 | 5.32 | 5.2 | 33.89 |
| 3267 | J. M. Brown, Home Mixture | --- | 2.69 | 2.32 | 5.01 | --- | 5.66 | 6.34 | 2.47 | 14.47 | --- | 3.10 | --- | 4.23 |
| 3268 | J. M. Brown, Home Mixture | --- | .34 | 1.92 | 2.26 | --- | 4.34 | 5.53 | 2.22 | 12.09 | --- | 17.22 | --- | 32 |
| 3273 | T. J. Stroud, Mixture for Corn | --- | .97 | 4.35 | 5.32 | 4.9 | .16 | 5.32 | 1.88 | 7.36 | 9.2 | 5.54 | 5.0 | .68 |
| 3281 | E. J. Wells, Home Mixture | --- | 1.55 | 2.41 | 3.96 | 3.9 | 4.16 | 6.32 | 4.03 | 14.52 | 13.5 | 6.76 | 5.4 | 38.27 |
| 3282 | E. J. Wells, Home Mixture | 1.63 | --- | 2.14 | 3.77 | 4.1 | 3.57 | 6.12 | 4.21 | 13.90 | 12.7 | 7.67 | 6.7 | 34.84 |
| 3283 | H. G. Osborne, Home Mixture | --- | 1.20 | 1.71 | 2.91 | --- | 5.02 | 3.83 | 1.92 | 10.77 | --- | 11.01 | --- | .93 |
| 3284 | H. G. Osborne, Home Mixture | .99 | --- | 2.28 | 3.27 | --- | 6.83 | 3.38 | .69 | 10.90 | --- | 8.70 | --- | 5.19 |

7673 041



University of
Connecticut
Libraries



39153029145168

